

CLAIMS:

What is claimed is:

1. A method in a primary data processing system for managing a catalog, the method
5 comprising:
 sending a catalog and user information to a plurality of secondary data processing
 systems located in a network data processing system;
 allocating inventory associated with the catalog to the plurality of secondary data
 processing systems;
10 receiving an order from one of the plurality of secondary data processing systems;
 and
 processing the order, in response to receiving the order.
2. The method of claim 1 further comprising:
15 sending an update to the catalog to the plurality of secondary data processing
 systems.
3. The method of claim 1 further comprising:
 receiving a request to reallocate the inventory from a particular secondary data
20 processing system within the plurality of secondary data processing systems;
 identifying a reallocation of the inventory in response to receiving the request; and
 sending messages to each secondary data processing system involved in the
 reallocation of the inventory.
- 25 4. The method of claim 3, wherein the request to allocate the inventory is received
 from the particular secondary data processing system upon a detection of a condition by
 the secondary data processing system.

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5. The method of claim 4, wherein the condition is a threshold.
6. The method of claim 1 further comprising:
5 periodically obtaining necessary shopping cart data from at least one secondary data processing system within the plurality of secondary data processing systems; and
forwarding the necessary shopping cart data to other secondary data processing systems within the plurality of secondary data processing systems.
- 10 7. The method of claim 4, wherein a secondary data processing system within the plurality of secondary data processing systems periodically obtains necessary shopping cart data from a particular secondary data processing system within a plurality of secondary data processing systems; and forwards the necessary shopping cart data to
15 other secondary data processing systems within the plurality of secondary data processing systems.
9. The method of claim 1, wherein the catalog is sent in a markup language document.
- 20 10. The method of claim 9, wherein the markup language is extensible markup language.
11. The method of claim 1 further comprising:
detecting a presence of another secondary data processing system; and
25 sending the catalog to the another secondary data processing system in response to detecting the presence.

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12. The method of claim 1, wherein the plurality of secondary data processing systems are located within a network data processing system.
13. The method of claim 12, wherein the network data processing system is at least one of a wide area network, an intranet, and the Internet.
14. The method of claim 1, wherein the catalog is a first catalog, the inventory is a first inventory, and further comprising:
sending a second catalog to a second plurality of secondary data processing systems; and
allocating the second inventory to be associated with the second catalog to the second plurality of secondary data processing systems.
15. The method of claim 14, wherein a particular item is present in the first catalog and the second catalog.
16. The method of claim 14, wherein a selected secondary server is part of the first plurality of secondary servers and the second plurality of secondary servers.
17. A system for processing commercial transactions of a user over a large geographic area comprising:
a network;
a primary computing node connected to the network;
a plurality of secondary computing nodes connected to the network, each of the plurality of secondary computing nodes being located at a set of geographic sites;
a plurality of product inventories, each of the plurality of product inventories being associated with one of the plurality of geographic sites; and

a catalog of products, wherein the catalog identifies the plurality of product inventories,

wherein the primary computing node notifies the plurality of secondary computing nodes of updates to the catalog, a user contacts a first node from the plurality of secondary computing nodes, the user places a product order with the first node, the first node forwards the order to the primary computing node, and the order is processed by the primary computing node.

18. The system of claim 17, wherein the primary computing node notifies the plurality of secondary computing nodes of the updates to the catalog by sending catalog data encoded in extensible markup language.

19. The system of claim 17, wherein the user is directed to the first node according to a load-balancing scheme.

20. The system of claim 17 wherein the primary computing node:
periodically obtains necessary shopping cart data from at least one secondary data processing system within the plurality of secondary data processing systems to primary data processing system; and
forwards the necessary shopping cart data to other secondary data processing systems within the plurality of secondary data processing systems.

21. The system of claim 19, wherein the load-balancing scheme is round-robin routing.

22. The system of claim 19, wherein the load-balancing scheme is to direct the user to one of a subset of the plurality of secondary computing nodes under normal operation

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and to direct the user to one of the entire plurality of secondary computing nodes when the system is under heavy load or when one of the plurality of secondary computing nodes has failed.

5 23. The system of claim 17, wherein the first node sends a request to the primary computing node to change an inventory for the first node.

24. The system of claim 17, wherein the user is directed towards the first node by a load balancing node implementing a load balancing scheme, wherein the load balancing
10 node receives all user requests directed towards the system.

25. The system of claim 17, wherein the primary computing node dynamically propagates changes to the catalog to the plurality of secondary computing nodes.

15 26. The system of claim 17, wherein the primary computing node is a first primary computing node and further comprising a second primary computing node.

27. The system of claim 26, wherein the catalog is a first catalog, the first primary computing node manages the first catalog, and the second primary computing node
20 manages a second catalog.

28. The system of claim 17, wherein orders are processed synchronously by the primary server.

25 29. The system of claim 17, wherein the order is received at the first node and forwarded to the primary computing node from the first computing node.

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30. A system for processing commercial transactions of a user over a large geographic area comprising:

a network;

a primary computing node connected to the network;

5 a plurality of secondary computing nodes connected to the network, each of the plurality of secondary computing nodes being located at a set of geographic sites;

a plurality of product inventories, each of the plurality of product inventories being associated with one of the plurality of geographic sites; and

10 a catalog of products, wherein the catalog identifies the plurality of product inventories,

wherein the primary computing node notifies the plurality of secondary computing nodes of updates to the catalog, a user contacts a first node from the plurality of secondary computing nodes, the user places a product order with the first node, the first node forwards the order to a selected node to process the order based on selected criteria.

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31. The system of claim 30, wherein the selected criteria is at least one of a geographic proximity, and a number of ordered items.

20 32. The system of claim 30, wherein the selected node is selected from one of the primary computing node and one of the plurality of secondary computing nodes.

33. A data processing system for managing a catalog, the data processing system comprising:

25 sending means for sending a catalog and user information to a plurality of secondary data processing systems located in a network data processing system;

allocating means for allocating inventory associated with the catalog to the plurality of secondary data processing systems;

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receiving means for receiving an order from one of the plurality of secondary data processing systems; and

processing means for processing the order, in response to receiving the order.

- 5 34. The data processing system of claim 33, wherein the sending means is a first sending means and further comprising:

second sending means for sending an update to the catalog to the plurality of secondary data processing systems.

- 10 35. The data processing system of claim 33, wherein the receiving means is a first receiving means, the sending means is a first sending means and further comprising:

second receiving means for receiving a request to reallocate the inventory from a particular secondary data processing system within the plurality of secondary data processing systems;

- 15 identifying means for identifying a reallocation of the inventory in response to receiving the request; and

third sending means for sending messages to each secondary data processing system involved in the reallocation of the inventory.

- 20 36. The data processing system of claim 35, wherein the request to allocate the inventory is received from the particular secondary data processing system upon a detection of a condition by the secondary data processing system.

37. The data processing system of claim 36, wherein the condition is a threshold.

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38. The data processing system of claim 33 further comprising:

obtaining means for periodically obtaining necessary shopping cart data from at

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least one secondary data processing system within the plurality of secondary data processing systems to primary data processing system; and

forwarding means for forwarding the necessary shopping cart data to other secondary data processing systems within the plurality of secondary data processing systems.

39. The data processing system of claim 38, wherein a secondary data processing system within the plurality of secondary data processing systems periodically obtains necessary shopping cart data from a particular secondary data processing system within a plurality of secondary data processing systems; and forwards the necessary shopping cart data to other secondary data processing systems within the plurality of secondary data processing systems.

40. The data processing system of claim 33, wherein the catalog is sent in a markup language document.

41. The data processing system of claim 33, wherein the markup language is extensible markup language.

42. The data processing system of claim 33, wherein the sending means is a first sending means and further comprising:

detecting means for detecting a presence of another secondary data processing system; and

fourth sending means for sending the catalog to the another secondary data processing system in response to detecting the presence.

43. The data processing system of claim 33, wherein the plurality of secondary data processing systems are located within a network data processing system.

44. The data processing system of claim 43, wherein the network data processing system is at least one of a wide area network, an intranet, and an Internet.

45. The data processing system of claim 33, wherein the catalog is a first catalog, the inventory is a first inventory, the sending means is a first sending means, the allocating means is a first allocating means and further comprising:

10 fifth sending means for sending a second catalog to a second plurality of secondary data processing systems; and

second allocating means for allocating the second inventory to associated with the second catalog to the second plurality of secondary data processing systems.

15 46. The data processing system of claim 45, wherein a particular item is present in the first catalog and the second catalog.

47. The data processing system of claim 45, wherein a selected secondary server is part of the first plurality of secondary servers and the second plurality of secondary servers.

48. A computer program product in a computer readable medium for managing a catalog, the computer program product comprising:

25 first instructions for sending a catalog and user information to a plurality of secondary data processing systems located in a network data processing system;

second instructions for allocating inventory associated with the catalog to the plurality of secondary data processing systems;

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third instructions for receiving an order from one of the plurality of secondary data processing systems; and

fourth instructions for processing the order, in response to receiving the order.

5 49. The computer program product of claim 48 further comprising:

fifth instructions for sending an update to the catalog to the plurality of secondary data processing systems.

50. The computer program product of claim 48 further comprising:

10 fifth instructions for receiving a request to reallocate the inventory from a particular secondary data processing system within the plurality of secondary data processing systems;

sixth instructions for identifying a reallocation of the inventory in response to receiving the request; and

15 seventh instructions for sending messages to each secondary data processing system involved in the reallocation of the inventory.

20 51. The computer program product of claim 50, wherein the request to allocate the inventory is received from the particular secondary data processing system upon a detection of a condition by the secondary data processing system.

52. The computer program product of claim 51, wherein the condition is a threshold.

53. The computer program product of claim 48 further comprising:

25 fifth instructions for periodically obtaining necessary shopping cart data from at least one secondary data processing system within the plurality of secondary data processing systems to primary data processing system; and

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sixth instructions for forwarding the necessary shopping cart data to other secondary data processing systems within the plurality of secondary data processing systems.

5 54. The computer program product of claim 53, wherein a secondary data processing system within the plurality of secondary data processing systems periodically obtains necessary shopping cart data from a particular secondary data processing system within a plurality of secondary data processing systems; and forwards the necessary shopping cart data to other secondary data processing systems within the plurality of secondary data
10 processing systems.

55. The computer program product of claim 48, wherein the catalog is sent in a markup language document.

15 56. The computer program product of claim 55, wherein the markup language is extensible markup language.

58. The data processing system of claim 48 further comprising:
fifth instructions for detecting a presence of another secondary data processing
20 system; and
sixth instructions for sending the catalog to the another secondary data processing system in response to detecting the presence.

59. The computer program product of claim 48, wherein the plurality of secondary
25 data processing systems are located within a network data processing system.

60. The computer program product of claim 59, wherein the network data processing system is at least one of a wide area network, an intranet, and an Internet.

61. The computer program product of claim 48, wherein the catalog is a first catalog,
5 the inventory is a first inventory, and further comprising:

fifth instructions for sending a second catalog to a second plurality of secondary data processing systems; and

sixth instructions for allocating the second inventory to associated with the second catalog to the second plurality of secondary data processing systems.

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62. The computer program product of claim 61, wherein a particular item is present in the first catalog and the second catalog.

63. The computer program product of claim 61, wherein a selected secondary server
15 is part of the first plurality of secondary servers and the second plurality of secondary servers.

64. A data processing system comprising:
a bus system;
20 a communications unit connected to the bus system;
a memory connected to the bus system, wherein the memory includes as set of instructions; and

5 a processing unit connected to the bus system, wherein the processing unit executes the set of instructions to send a catalog to a plurality of secondary data processing systems located in a network data processing system; allocate inventory associated with the catalog to the plurality of secondary data processing systems; receive an order from one of the plurality of secondary data processing systems; and process the order, in response to receiving the order.

10 65. The data processing system of claim 64, wherein the processor further executes the set of instructions to send an update to the catalog to the plurality of secondary data processing systems.

15 66. The data processing system of claim 64, wherein the processor further executes the set of instructions to receive a request to reallocate the inventory from a particular secondary data processing system within the plurality of secondary data processing systems; identify a reallocation of the inventory in response to receiving the request; and send messages to each secondary data processing system involved in the reallocation of the inventory.

20 67. The data processing system of claim 64 wherein the processor further executes the set of instructions to periodically obtain necessary shopping cart data from at least one secondary data processing system within the plurality of secondary data processing systems to primary data processing system; and forwards the necessary shopping cart data to other secondary data processing systems within the plurality of secondary data processing systems.

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68. The data processing system of claim 64, wherein the catalog is sent in a markup language document.

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69. The data processing system of claim 68, wherein the markup language is extensible markup language.

5 70. The data processing system of claim 64, wherein the processor further executes the set of instructions to detect a presence of another secondary data processing system; and send the catalog to the another secondary data processing system in response to detecting the presence.

10 71. The data processing system of claim 64, wherein the plurality of secondary data processing systems are located within a network data processing system.

72. The data processing system of claim 71, wherein the network data processing system is at least one of a wide area network, an intranet, and an Internet.

15 73. The data processing system of claim 64, wherein the catalog is a first catalog, the inventory is a first inventory and the processor further executes the set of instructions to send a second catalog to a second plurality of secondary data processing systems; and allocate the second inventory to associated with the second catalog to the second plurality
20 of secondary data processing systems.

74. The data processing system of claim 73, wherein a particular item is present in the first catalog and the second catalog.

25 75. The data processing system of claim 73, wherein a selected secondary server is part of the first plurality of secondary servers and the second plurality of secondary servers.

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